Work Order II July-12-13 10:32:21			*1046	355*			·				Page 1
Item ID: D210 Revision ID: Item Name: Cap A Start Date: 7/12A Required Date: 7/12A	Angle /13 Start Qty: \( \frac{1}{2} \)	*6*	Accept :	*N900 Cust Item I Customer:		100	)* s	_	Start Stop	ıv.	S1* S2*
Approvals: Pro	cess Plan: MLJ				ate:		R	lun	Start Stop	*N  *N	R1* R2*
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr										<del></del>
D2163	Rev B										
100 *100* Waterjet FLOW CNC Waterjet 5052.050		s per Dwg D2163 Dwg Rev:	0.00 0.00 Prog Rev: 3	_2-			34		<u></u>		<u>Au</u> 13:11.03
110 *110* QC Quality Control	QC2- Inspect parts o	ff machine FAI/FAIB	0.00				34	_ 4	<b>)</b>		<u>Au</u> 13·11·03
120 *120* QC Quality Control	QC8- Inspect parts -	second check	0.00 SW	4			34 Cara			<u>.</u>	-

DQA:			Date:			MODIC ODDED NON	~		DAANCE / LID	DATE			DART
QA Closed:			Date:			WORK ORDER NON	-((	JNFOR	RIVIAINCE / UPI		ork Order up	date only	AEROSPACE
						DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Work Orde	er:				-	, ,	1		a	<u> </u>	7	\\\\-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	]
Part N	ام				İ	Rework Scrap	┨		Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
raitiv						Use-as-is	1		noforming	Finishing	4	e/Packaging	Other
NCR N	lo.					Suspected Unapproved			<u> </u>	Composite	1 1160/3101	Supplier	
110111						Suspected Onapproved			zarge rau				<b>-</b>
Root		-			Desci	ription of work order update		nitial	Actio	on	Sign &		
Cause	Da	ate	Step	Qty		or non-conformance	Ch	ief Eng	Descrip	otion	Date	Verification	QC Inspector
Design								,					
Doc/Data	_												
Equip/Tooling	_									· .			
Handling/Pre		1											
Material						•							
Operator													
Offset/Setup						•							
Process		.											
Supplier	Ш												
Training													,
Transport													
Unapproved							<u> </u>				<u> </u>		
							FA	ULT CAT	EGORY				
Landi	ng Gear				_	General	_	1		_	7	_	<b>-</b>
	Ben	-			<u> </u>	Bend	_	1	rogram	<u> </u>	Outside Dim	—	Pressure/Forced
	_		Concer	ntric	.	BOM/Route	<u> </u>	Grain		<u> -</u>	Over/Under	<del> </del>	Set-up
	Crac				<u> </u>	Broken/Damage/Defect		Hardwa		_	Part Incorre	<del> </del>	Temperature/Cure
	${f oxed{ o}}$	•	<td>/Wave</td> <td>_</td> <td>Burrs</td> <td>_</td> <td>1</td> <td>on Incomplete/Unq</td> <td>· -</td> <td>Part Lost/Mi</td> <td>ssing</td> <td>Weld</td>	/Wave	_	Burrs	_	1	on Incomplete/Unq	· -	Part Lost/Mi	ssing	Weld
	Cuff				<u> </u>	Contamination	_	4	ions Incomplete/Un	ıclear	Part Moved	L	Wrong Stock Pulled
	_	hing			<u> </u>	Countersink	<u>_</u>	1	ned/off center		Positioned V	_	7
	<del></del>	t Treat			<u> </u>	Cut Too Short	$\vdash$	Mislabe		L	Power Loss/	Surge	Other
	<b>⊢</b>		Strip in	Tube	<u> </u>	Drawing		Misread	1				
	$\vdash$	ks/Cha			<u> </u>	Drill Holes	$\vdash$	Off-set				- ·	
	<del></del>		quence			Finish		4	Calibration				
	l lWav	/e/Twis	st in Tub	e e		Fit/Function	1	Out of 9	Sequence				

H:/FORMS/Quality Assurance\approved QA/NCRWO RevH

W	ork	Order	ID	104655
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## \*101655\*

Page 2

July-12-13 10:	32:21 AM			1 ( )4		: <u>-</u> =.						
Item ID: Revision ID: Item Name:	D2163 Cap Angle			Accept	*N900	<b>040</b>	100	<b>)</b> *	Setup	Start Stop	*N:	S1* S2*
Start Date: Required Date Reference:	7/12/13	Start Qty: 6.00 Req'd Qty: 6.00	*6* *6*		Cust Item I Customer:	D:				<b>G</b> ( )	14.	17
Approvals:		an:		Tooling: SPC (Y/N):		ate: ate:			Run	Start Stop	*N  *N	R1* R2*
Sequence ID/ Work Center 130 *130* Brake NC Brake NC	ID	Operation Description  NC BRAKE  Memo Form as per	r QSI 003 and Dwg D2163	Set Up/ Run Hours 0.00	Tool ID	Tool #  DAS 30 9-89	Plan Code	Accept Qty	t Re Qt	•	Reject Number	Insp. Stamp
140 *14  CC  QC  Quality Control		QC5- Inspect part comp	eleteness to step on W/O	0.00 SM				34 Why	<u> </u>			,
*150 *150* HandFinish Hand Finishing		Chemical Conversion C	Coat per QS1005 4.1	0.00				34	<u>/</u>	H67/	<u> 3-11                                  </u>	9

DQA:						MODY ODDED MON	~		NAANICE / II	DDATE			~DART
QA Closed:			Date:			WORK ORDER NON-	-CC	JNFOR	RIVIAINCE / U		Vork Order up	odate only	AEROSPACE
			.=			DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	
Work Orde	er: _					5			crist and a	C	7	\\\\ata_{10}\[ \[ \]	
D = A	1_					Rework			Skid-tube	Crosstube Small Fab	-  <sub>Dra</sub>	Water Jet	Engineering Quality
Part N	NO				-	Scrap Use-as-is			Machining noforming	Finishing	<del></del>	d. Eng. Coor. re/Packaging	Other
NCR N	d۵					Suspected Unapproved			Large Fab	Composite	1,60,310	Supplier	
HCKI	<b>'</b> '-					Juspected Onapproved			Earge rab	Composite		Supplier [	
Root					Desci	ription of work order update	1	nitial	Act	tion	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Design		•				·							
Doc/Data			:										
Equip/Tooling													
Handling/Pre													
Material	Ш					3k <sub>y</sub>			:				
Operator	Ш					e di. Agai			•				
Offset/Setup	Ш												
Process	Ш		_	į									
Supplier	Ц												
Training	Ш												
Transport	Ш												
Unapproved							<u> </u>				<u>, ļ</u>		
	- · · · · · · · · · · · · · · · · · · ·		<del></del>				FAI	ULT CA	rEGORY	-			
Landi					_	General	_	1		г	<b>–</b>	. г	¬
	$\vdash$	Bending			<u> </u>	Bend	$\vdash$	1	rogram	-	Outside Dim	<u>-</u>	Pressure/Forced
	-	Centre No	ot Concei	ntric		BOM/Route	<u> </u>	Grain		-	Over/Under	<del> </del>	Set-up
	_	Cracks	1.45: 1	644		Broken/Damage/Defect	<u> </u>	Hardwa			Part Incorre	- H	Temperature/Cure
	$\boldsymbol{H}$	Crimp/Kii	nk/Ripple	e/Wave	-	Burrs	-	1	ion Incomplete/U	<u> </u>	Part Lost/M	-	Weld
	$\vdash$	Cuffs			-	Contamination	-	4	ions Incomplete/	<del>-</del>	Part Moved	L	Wrong Stock Pulled
	-	Crushing			$\vdash$	Countersink	$\vdash$	• •	ned/off center	-	Positioned \		Othor
	-	Heat Trea		Tuba	-	Cut Too Short	$\vdash$	Mislabe		L	Power Loss,	Surge	Other
	$\vdash$	Inspectio	• •	eaur	-	Drawing Drill Holes	┝	Misread Off-set	ג				
	$\vdash$	Marks/Cl			-	Finish	-	4	Calibration		<del>"</del>	. <u> </u>	
	$\blacksquare$	Turning S Wave/Tw			$\vdash$	Fit/Function	-	4	Calibration Sequence				
ı		VVQVC/IV	713 CHI TUL	uc	1	II IV I UIICUOII		IUULUI.	JEGUETICE				

<b>Work Ord</b> <i>July-12-13</i> 10:3				*1046	355*							Page 3
Item ID: Revision ID: Item Name:	D2163 Cap Ang	le		Accept	*N900	040	100	)* 5	Setup	Start Stop	*NS	S1*
Start Date: Required Date: Reference:	7/12/13	Start Qty: 6.00 Req'd Qty: 6.00	*6* *6*		Cust Item I Customer:	D:						17
Approvals: Process  QC:		s Plan:				ite:		j		Start Stop	*NI *NI	₹1* ₹2*
Sequence ID/ Work Center I 160 *160* Powdercoat Powder Coating	D	Operation Description Black Sandtex(Ref 4-3 MIT 33 Memo START LIN	d. 20	Set Up/ Run Hours 0.00  0.00  OVEN TEMPERATURE	Tool ID	Tool #	Plan Code	Accept Qty	Reje Qty	Ŋ	Reject Number	Insp. Stamp  DAS  34 989
170 *170* QC Quality Control		QC3- Inspect Part Finis  Memo	h	0.00 DAS 0.00 27 9-89 0.00 Sli	В		,	34,	<u> </u>			
180 *180* Packaging		ldentify as per dwg & S	tock Location:	0.00				34x	· 			DAS 26 9-89

Memo

Packaging

JQA: _		····	Date:			WORK ORDER NON-	.cc	NEOF	RMANCE / II	PDΔTF				<u>_</u>	
QA Closed:			Date:			WORK ORDER ROLL		3141 01	divizately o		Wo	ork Order up	date only	<u> </u>	AEROSPACE
Work Orde	r:					DISPOSITION				AGAINST	DE	PARTMENT,	_	_	
Part N NCR N	_					Rework Scrap Use-as-is Suspected Unapproved		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		i	Water Jet d. Eng. Coor. e/Packaging Supplier		Quality Other
Root					Desci	ription of work order update	1	nitial	Act	tion		Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Desc	ription		Date	Verification	QC	Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved															
							FAI	ULT CA	TEGORY						
Landir	B C C C C C C C C C C C C C C C C C C C	ar ending entre No racks rimp/Kin uffs rushing leat Trea nspection Marks/Ch	ik/Ripple t n Strip in atter	/Wave Tube		General Bend BOM/Route Broken/Damage/Defect Burrs Contamination Countersink Cut Too Short Drawing Drill Holes Finish		Grain Hardwa Inspect Instruct Misalia Mislaba Misread Off-set	ion Incomplete/U tions Incomplete/ gned/off center eled d			Outside Dim Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	tolerance ct ssing Vrong	Set-up Tempe Weld	re/Forced  Prature/Cure  Stock Pulled
	[	Vave/Tw	ist in Tub	oe .		Fit/Function		Out of	Sequence						

Work Ord July-12-13 10:		04655		*104655*												
Item ID: Revision ID: Item Name:	D2163 Cap Angle			Accept	*N900	<b>040</b>	100	)* Se	tup Start	וייעו						
Start Date: Required Date Reference:	7/12/13	Start Qty: 6.00 Req'd Qty: 6.00	*6* *6*		Cust Item I Customer:	D:										
Approvals:		lan:	Date:	Tooling: SPC (Y/N):		ate:		R	un Start Stop	*NR1* *NR2*						
Sequence ID/ Work Center	ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	•	Reject Insp. Number Stamp						
*190 *190*		QC21- Final Inspection	- Work Order Release	0.00					Rm	13/11/20						

Quality Control

NB1130

DQA:	**	Date:			MODIC ORDER MON	~	201501	DRAABICE / LIDDATE				
QA Closed:		Date:			WORK ORDER NON-	-C(	JNFOI	RIVIANCE / UPDATE	W	ork Order up	date only	AEROSPACE
Work Order:	12				DISPOSITION			AGAINS	ST DE	PARTMENT,	/PROCESS	
Part No.				—   —	Rework Scrap Use-as-is Suspected Unapproved			Skid-tube Crosstub Machining Small Fa noforming Finishir Large Fab Composit	ab ng	1	Water Jet d. Eng. Coor. re/Packaging Supplier	Quality
Root				Desci	ription of work order update		Initial	Action		Sign &		
Cause	Date	Step	Qty		or non-conformance	1	ief Eng	Description		Date	Verification	n QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved												
					•	FA	ULT CA	regory				
Landing	Bending Centre No Cracks Crimp/Kii	ot Concer nk/Ripple			General Bend BOM/Route Broken/Damage/Defect Burrs		Grain Hardwa Inspect	ion Incomplete/Unqualified		Outside Dim Over/Under Part Incorre Part Lost/Mi	tolerance ct	Pressure/Forced Set-up Temperature/Cure Weld
	Cuffs Crushing Heat Trea Inspectio Marks/Ch	at n Strip in	Tube		Contamination Countersink Cut Too Short Drawing Drill Holes		Misalig Mislabe Misread	d		Part Moved Positioned V Power Loss/	- r	Wrong Stock Pulled Other
	-	equence			Finish Fit/Function	F	4	Calibration				

July-12-13 10:32:21 AM

Work Order ID:

104655

Parent Item:

D2163

Parent Item Name:

Cap Angle

**Start Date: 7/12/13** 

Required Date: 7/12/13

Start Qty: 6.00

Required Qty: 6.00

Comments:

IPP: F02.05.11Clarify IPP NG
IPP Rev:G 07-11-08 Now On Wateriet JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
<b>M5052H32S.050</b> 5052-H32 .050 Sheet		Purchased	No	-		110	sf	190.0000	0.0694	0.4383156	Au	13	111.0
				<b>Location</b>		Loc Qty	<u>Lo</u>	c Code					
				MAT022		190						. 0	-
				1153	89	63			115	<u> 5389 —</u>	<del></del>	1	0
				1162	68	63						1 <del>. 9</del> 2.4	U
				4894		64							•

DQA:		<del></del>	Date:	·		WORK ORDER NON-	cc	NICO	DRAANCE / LII	DDATE			DART
QA Closed:			Date:			WORK ORDER NON-	-((	JINFOR	RIVIAINCE / UI		/ork Order up	odate only	AEROSPACE
M						DISPOSITION				AGAINST D	EPARTMENT,	/PROCESS	
Work Orde	r:					Rework			Skid-tube	Crosstube	7	Water Jet	Engineering
Part N	lo.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
, are i						Use-as-is			noforming	Finishing	<b>-</b>	re/Packaging	Other
NCR N	lo					Suspected Unapproved			Large Fab	Composite	]	Supplier	]
Root	<u> </u>				Desc	ription of work order update		nitial	Act	ion	Sign &		
Cause		Date	Step	Qty		or non-conformance		ief Eng		ription	Date	Verification	QC Inspector
Design			0.00		-	`							
Doc/Data	┨.	·											
Equip/Tooling													·
Handling/Pre													
Material													
Operator													
Offset/Setup													,
Process													
Supplier													
Training													
Transport													
Unapproved		•		<u> </u>									
					<u> </u>	,	FA	ULT CAT	EGORY			F 100	
Landi	ng Gea	ır				General	_	,		_	<b>-</b>		
	B€	nding			<u> </u>	Bend		Folio/F	rogram	L	Outside Dim	iensions	Pressure/Forced
	Ce	ntre No	ot Concer	ntric	<u> </u>	BOM/Route		Grain		<u> </u>	Over/Under	<b>}</b>	Set-up
	-	acks				Broken/Damage/Defect	<u> </u>	Hardwa	re	_	Part Incorre	<del> </del>	Temperature/Cure
	$\blacksquare$		ık/Ripple	/Wave		Burrs	L	Inspect	ion Incomplete/Ui	nqualified	Part Lost/M	issing	Weld
		ıffs			<u> </u>	Contamination		4	ions Incomplete/	Jnclear	Part Moved		Wrong Stock Pulled
		ushing				Countersink		- 1	ned/off center	L	Positioned \		_
	-	eat Trea				Cut Too Short		Mislabe		. L	Power Loss/	'Surge	Other
			n Strip in	Tube		Drawing	<u></u>	Misread				· -·	
	-	arks/Ch	•			Drill Holes	L	Off-set					
	_		equence		<u> </u>	Finish	L	Out of 0	Calibration				
	l lw	ave/Tw	ist in Tuk	oe .	- 1	Fit/Function	i i	Out of 5	Sequence				

DART AEROSPACE LTD	Work Order:	104655
Description: Trim Angle	Part Number:	D2163
Inspection Dwg: D2163 Rev: B		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

X First Article	Prototype
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				7     -		
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
8.165	+/-0.010	8.167	-		٧	w) - 09
R0.375	+/-0.010	.375	-		<b>R</b> G	-50 -5
Ø0.098	+0.005/-0.000	.100	-		V	
0.250	+/-0.010	,250			V	
0.580	+/-0.010	.580	_		V	
1.121	+/-0.010	1.121	-	,	Y	
0.050	+/-0.010	,048	-		V	

Measured by:	Ac	Audited by:	5m/3	Prototype Approval:	N/A
Date:	13.11.03	Date:	1311.04	Date:	N/A

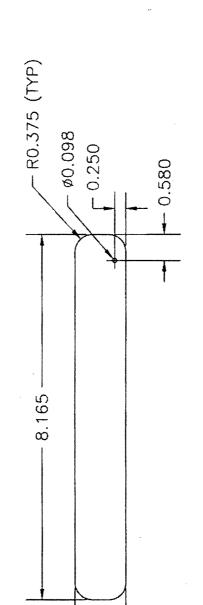
Rev	Date	Change	Revised by	Approvéd
Α	05.05.10	New Issue	KJ/JLM A	77 77
	1		1.10.02.11.0, 7	



0.587

		1			
	DESIG	<u> </u>	BW	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA	
ĺ	CHÉC	(ED	APPROVED	DRAWING NO. RI	EV. 8
	,	KE	4	D2163 SHEET 1	OF .1
	DATE			TILE	SCALE
	97.1	0.30		TRIM ANGLE	1:2
	Α		95.05.19	RE-DRAWN	
	В		97.10.30	REMOVE BEND DATA	





5052-H32 (QQ-A-250/8) 0.050 THICK POWER COAT MATTE BLACK PER DART QSI 005 4.3 MATERIAL: FINISH: